
**2004 Women, Minorities, and
Persons with Disabilities in
Science and Engineering**



National Science Foundation

NSF 04-317

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Persons with Disabilities in
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Suggested Citation

National Science Foundation, Division of Science Resources Statistics, *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2004*, NSF 04-317 (Arlington, VA, 2004).

May 2004

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Acknowledgments

Organizational responsibility for this report is held by the Division of Science Resources Statistics (SRS), Lynda T. Carlson, Director, of the National Science Foundation's (NSF's) Directorate for Social, Behavioral and Economic Sciences, Wanda E. Ward Acting Assistant Director. The report was prepared by SRS's Human Resources Statistics Program under the direction of Nancy L. Leach, Program Director; Mary J. Frase, Acting Program Director; and Mary A. Golladay, retired. Joan Burrelli organized the report and generated the tables and text. Emy Sok of the Bureau of Labor Statistics, Aurora D'Amico of the National Center for Education Statistics, and John Tsapogas, Jean M. Johnson, Maurya M. Green, and Deborah A. Collins of SRS provided data and/or tables. Rolfe W. Larson, Peg Whalen, and Tanya R. Gore of SRS's Information and Technology Services Program, under the direction of John R. Gawalt, Program Director, coordinated editing and composition and developed the Web site. Substantive and copyediting services were provided by Aspen Systems Inc., composition and design services by EDO Corporation Professional Services Division and Omnistudio, and Web design and coding by Compuware Corporation.

Review and guidance for this report were provided by Mary J. Frase, Deputy Director of SRS, and Ronald S. Fecso, Chief Statistician of SRS. Fran Featherston facilitated the review process. Members of the review committee for this report were Robert K. Bell, Myles Boylan, Fran Featherston,

Mark C. Regets, Judy Sunley, Wanda E. Ward, and R. Keith Wilkinson of NSF.

The following individuals provided comments on the new concept and/or the tables and text: Norman M. Bradburn, former Assistant Director, NSF's Directorate for Social, Behavioral, and Economic Sciences; Eleanor Babco, Commission on Professionals in Science and Technology; Beatriz Clewell, The Urban Institute; Catherine Didion, Association for Women in Society; Yolanda George and Shirley Malcom, American Association for the Advancement of Science; Beverly Hartline, Education and Management Consultant, and Lilian Wu, IBM Corporation. Members of the Committee on Equal Opportunities in Science and Engineering (CEOSE) also provided comments on the new concept. The 2004 members included Indira Nair, Carnegie Mellon University; Robert Lichter, Merrimack Consultants; David Burgess, Boston College; Luis Echigoyen, Clemson University; Beverly Hartline, Education and Management Consultant; J.K. Haynes, Morehouse College; Joyce Justus, University of California at Santa Cruz; Samuel Myers, Jr., University of Minnesota; Willie Pearson, Jr., Georgia Institute of Technology; Carol Schwartz, New York Institute of Technology; Telle Whitney, Anita Borg Institute for Women & Technology; Lilian Wu, IBM Corporation; and Sara Young, Montana State University. Margaret E.M. Tolbert, NSF Executive Liaison to CEOSE, and John F. Wilkinson, NSF Director's Liaison, were also consulted.

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About This Report

Women, Minorities, and Persons with Disabilities in Science and Engineering is moving toward a new concept to provide the most current information available. Rather than being a static report, the new format is a dynamic Web-based information source with data updated as they become available. This site is a starting point for finding information about the participation of women, minorities, and persons with disabilities in science and engineering education and employment. Its primary purpose is to serve as an information source; it offers no endorsement of or recommendations about policies or programs. National Science Foundation reporting on this topic is mandated by the Science and Engineering Equal Opportunities Act (Public Law 96-516).

This site contains data tables organized by topic (e.g., undergraduate enrollment, graduate degrees, employment) and also by group (e.g., Hispanics, minority women, persons with disabilities). Presentation slides, which are charts in PowerPoint, graphic, and spreadsheet formats, are provided for easy downloading. Furthermore, links to additional data sources (e.g., National Center for Education Statistics, American Council on Education) and reports on these topics are provided. Data on this website are updated as they become available. A complete update of the report is issued every 2 years.

Racial/ethnic information

In October 1997, the U.S. Office of Management and Budget announced new government-wide standards for the collection of data on race and ethnicity (published as U.S. OMB 1999) effective January 1, 2003. Previously, racial/ethnic groups were identified as white, non-Hispanic; black, non-Hispanic; Hispanic; Asian or Pacific Islander; and American Indian or Alaskan Native. Because the old standards were in effect when the data for this report were collected, the racial/ethnic groups described here are designated by the old standards. Where data collection permits, subgroups of the Hispanic population are identified (e.g., Mexican, Puerto Rican).

Many of the groups of particular interest are quite small, so that it is difficult to measure them accurately without surveys of the entire population. In some instances, sample surveys may not have been of sufficient scope to permit calculation of reliable racial/ethnic population estimates;

consequently, results are not shown for all groups. The Bureau of the Census's Current Population Survey, for example, cannot provide data on American Indians. Data on this population are available only from the decennial census. Another issue related to race/ethnicity is that it is easy to overlook or minimize heterogeneity within subgroups when only a single statistic is reported for an entire racial/ethnic group.

Data on race/ethnicity are often based on self-identification. These data are less reliable for certain racial/ethnic groups than for others. For example, data collected at two points in time indicate that self-identification of American Indians is much less reliable than self-identification of other racial/ethnic groups.¹

Information about people with disabilities

Data on people in science and engineering who have disabilities are seriously limited for several reasons. First, the operational definitions of *disability* vary, include a wide range of physical and mental conditions, and thus are not totally comparable. The Americans With Disabilities Act of 1990 (ADA) encouraged progress toward standard definitions. Under ADA, an individual is considered to have a disability if he or she has a physical or mental impairment that substantially limits one or more of his or her major life activities, has a record of such impairment, or is regarded as having such an impairment. ADA also contains definitions of specific disabilities. See <http://www.usdoj.gov/crt/ada/pubs/ada.txt>.

Second, data on disabilities frequently are not included in comprehensive institutional records (e.g., in registrars' records in institutions of higher education). If included at all, such information is likely to be kept only in confidential files at an office responsible for providing special services to students. Institutions of higher education are unlikely to have information regarding any students with disabilities who have not requested special services. In elementary and secondary school programs receiving funds to provide special education, however, statistics on all students identified as having special needs are centrally available.

¹U.S. Bureau of Labor Statistics, *A Test of Methods for Collecting Racial and Ethnic Information* (Washington, DC: U.S. Department of Labor, 1995).

Third, information about people with disabilities that is gathered from surveys is often obtained from self-reported responses. Typically, respondents are asked whether they have a disability and to specify what kind of disability it is. Resulting data therefore reflect individual perceptions rather than objective measures.

The attempt to provide estimates of the proportion of the undergraduate student population with disabilities is an example of how these factors coalesce. Self-reported data on the undergraduate student population, collected through a survey to ascertain patterns of student financial aid, suggest

that about 10 percent of this population have a disability. Estimates from population surveys of higher education institutions, in contrast, place the estimate much lower, between 1 and 5 percent. Whether this discrepancy is the result of self-perception, incomplete reporting, nonevident disabilities, or differing definitions is difficult to ascertain.

In the final analysis, although considerable information is available about the number of individuals with disabilities in the education system and in the science and engineering workforce, it is often impossible to compare statistics from different sources.